```
FFFFFFFFFFFFFF     000000000    RRRRRRRRRRRR    RRRRRRRRRRRR    TTTTTTTTTTTTTTT   LLL
FFFFFFFFFFFFFF     000000000    RRRRRRRRRRRR    RRRRRRRRRRRR    TTTTTTTTTTTTTTT   LLL
FFFFFFFFFFFFFF     000000000    RRRRRRRRRRRR    RRRRRRRRRRRR    TTTTTTTTTTTTTTT   LLL
FFF             000       000   RRR        RRR  RRR        RRR        TTT         LLL
FFF             000       000   RRR        RRR  RRR        RRR        TTT         LLL
FFF             000       000   RRR        RRR  RRR        RRR        TTT         LLL
FFF             000       000   RRR        RRR  RRR        RRR        TTT         LLL
FFF             000       000   RRR        RRR  RRR        RRR        TTT         LLL
FFFFFFFFFFF     000       000   RRRRRRRRRRRR    RRRRRRRRRRRR          TTT         LLL
FFFFFFFFFFF     000       000   RRRRRRRRRRRR    RRRRRRRRRRRR          TTT         LLL
FFFFFFFFFFF     000       000   RRRRRRRRRRRR    RRRRRRRRRRRR          TTT         LLL
FFF             000       000   RRR    RRR      RRR    RRR            TTT         LLL
FFF             000       000   RRR    RRR      RRR    RRR            TTT         LLL
FFF             000       000   RRR    RRR      RRR    RRR            TTT         LLL
FFF             000       000   RRR      RRR    RRR      RRR          TTT         LLL
FFF             000       000   RRR      RRR    RRR      RRR          TTT         LLL
FFF               000000000     RRR        RRR  RRR        RRR        TTT         LLLLLLLLLLLLLLL
FFF               000000000     RRR        RRR  RRR        RRR        TTT         LLLLLLLLLLLLLLL
FFF               000000000     RRR        RRR  RRR        RRR        TTT         LLLLLLLLLLLLLLL
```

```
FFFFFFFFFF   000000    RRRRRRR    IIIIII    DDDDDDD     AAAAAA   TTTTTTTTTT  EEEEEEEEEE
FFFFFFFFFF   000000    RRRRRRR    IIIIII    DDDDDDD     AAAAAA   TTTTTTTTTT  EEEEEEEEEE
FF           00    00  RR    RR      II     DD    DD   AA    AA      TT      EE
FF           00    00  RR    RR      II     DD    DD   AA    AA      TT      EE
FF           00    00  RR    RP.     II     DD    DD   AA    AA      TT      EE
FF           00    00  RR    RR      II     DD    DD   AA    AA      TT      EE
FFFFFFFF     00    00  RRRRRRRR      II     DD    DD   AA    AA      TT      EEEEEEEE
FFFFFFFF     00    00  RRRRRRR       II     DD    DD   AA    AA      TT      EEEEEEEE
FF           00    00  RR  RR        II     DD    DD   AAAAAAAAAA    TT      EE
FF           00    00  RR   RR       II     DD    DD   AAAAAAAAAA    TT      EE
FF           00    00  RR    RR      II     DD    DD   AA    AA      TT      EE
FF           00    00  RR    RR      II     DD    DD   AA    AA      TT      EE       ....
FF           000000    RR     RR   IIIIII   DDDDDDD    AA    AA      TT      EEEEEEEEEE  ....
FF           000000    RR     RR   IIIIII   DDDDDDD    AA    AA      TT      EEEEEEEEEE  ....

LL           IIIIII    SSSSSSSS
LL           IIIIII    SSSSSSSS
LL             II      SS
LL             II      SS
LL             II      SS
LL             II      SSSSSS
LL             II      SSSSSS
LL             II           SS
LL             II           SS
LL             II           SS
LL             II           SS
LLLLLLLLLL   IIIIII    SSSSSSSS
LLLLLLLLLL   IIIIII    SSSSSSSS
```

FOR$DATE
1-002

I 15
; Time and date as short integers   15-SEP-1984 23:53:01   VAX/VMS Macro V04-00   Page 1
                                            6-SEP-1984 10:56:21   [FORRTL.SRC]FORIDATE.MAR;1   (1)

```
0000      1              .TITLE  FOR$DATE        ; Time and date as short integers
0000      2              .IDENT  /1-002/         ; File: FORIDATE.MAR
0000      3
0000      4     ;
0000      5     ;*******************************************************************************
0000      6     ;*                                                                             *
0000      7     ;*   COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                   *
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0000     24     ;*                                                                             *
0000     25     ;*                                                                             *
0000     26     ;*******************************************************************************
0000     27     ;
0000     28     ;
0000     29     ; FACILITY: FORTRAN SYSTEM LIBRARY
0000     30     ;++
0000     31     ; ABSTRACT:
0000     32     ;
0000     33     ;       Return current month, day, and year as one-word integer values.
0000     34     ;
0000     35     ;--
0000     36     ;
0000     37     ; VERSION: 0
0000     38     ;
0000     39     ; HISTORY:
0000     40     ;
0000     41     ; AUTHOR:
0000     42     ;       Jonathan M. Taylor, 17-Aug-77: Version 0
0000     43     ;
0000     44     ; MODIFIED BY:
0000     45     ;
0000     46     ;
0000     47     ;
```

FOR$IDATE
1-002

J 15
; Time and date as short integers   15-SEP-1984 23:53:01   VAX/VMS Macro V04-00   Page 2
HISTORY ; Detailed Current Edit History 6-SEP-1984 10:56:21   [FORRTL.SRC]FORIDATE.MAR;1   (2)

```
0000    49              .SBTTL  HISTORY          ; Detailed Current Edit History
0000    50
0000    51
0000    52  ; Edit History for Version 0 of FOR$IDATE
0000    53  ;
0000    54  ; 0-2   - Remove FOR$FLAG_JACKET.  TNH 11-July-78
0000    55  ; 1-001 - Update version number and copyright notice.  JBS 16-NOV-78
0000    56  ; 1-002 - Add "_" to the PSECT directive.  JBS 22-DEC-78
```

```
             0000    58            .SBTTL  DECLARATIONS
             0000    59
             0000    60 ;
             0000    61 ; INCLUDE FILES:
             0000    62 ;     oerr.mar
             0000    63
             0000    64 ;
             0000    65 ; EXTERNAL SYMBOLS:
             0000    66 ;
             0000    67
             0000    68 ;
             0000    69 ; MACROS:
             0000    70 ;
             0000    71
             0000    72 ;
             0000    73 ; PSECT DECLARATIONS:
         00000000    74            .PSECT  _FOR$CODE        PIC, SHR, LONG, EXE, NOWRT
             0000    75
             0000    76 ;
             0000    77 ; EQUATED SYMBOLS:
             0000    78 ;
             0000    79
             0000    80 ;
             0000    81 ; OWN STORAGE:
             0000    82 ;     none
```

L 15

FOR$IDATE   ; Time and date as short integers   15-SEP-1984 23:53:01   VAX/VMS Macro V04-00   Page   4
1-002   FOR$IDATE - return month, day, year as I 6-SEP-1984 10:56:21   [FORRTL.SRC]FORIDATE.MAR;1   (4)

```
                                 0000    84                .SBTTL  FOR$IDATE - return month, day, year as INTEGER*2
                                 0000    85
                                 0000    86        ;++
                                 0000    87        ; FUNCTIONAL DESCRIPTION:
                                 0000    88        ;
                                 0000    89        ;       FOR$IDATE uses system service $NUMTIM to get date information.
                                 0000    90        ;       This information is converted to the appropriate type and stored
                                 0000    91        ;       through the addresses passed as parameters.
                                 0000    92        ;
                                 0000    93        ; CALLING SEQUENCE:
                                 0000    94        ;
                                 0000    95        ;       CALL FOR$IDATE (month.ww.r, day.ww.r, year.ww.r)
                                 0000    96        ;
                                 0000    97        ; INPUT PARAMETERS:
                                 0000    98        ;
                                 0000    99        ;       month.ww.r      adr of word to place month (1-12) integer
                                 0000   100        ;       day.ww.r        adr of word to place day (1-31) integer
                                 0000   101        ;       year.ww.r       adr of word to place year (0-99) integer
                                 0000   102        ;
                                 0000   103        ; IMPLICIT INPUTS:
                                 0000   104        ;       NONE
                                 0000   105        ;
                                 0000   106        ; OUTPUT PARAMETERS:
                                 0000   107        ;       NONE
                                 0000   108        ;
                                 0000   109        ; IMPLICIT OUTPUTS:
                                 0000   110        ;       NONE
                                 0000   111        ;
                                 0000   112        ; COMPLETION CODES:
                                 0000   113        ;       NONE
                                 0000   114        ;
                                 0000   115        ; SIDE EFFECTS:
                                 0000   116        ;       SIGNALs Integer Overflow (this should never happen)
                                 0000   117        ;
                                 0000   118        ;--
                                 0000   119
                                 0000   120
                                 0000   121
                            4000 0000   122                .ENTRY  FOR$IDATE,          ^M<IV>
                   5E   10   C2 0002   123                SUBL    #16, SP                     ; save 8 words for $NUMTIM
                   50   5E   D0 0005   124                MOVL    SP, R0                      ; R0 -> data area
                                 0008   125                $NUMTIM_S             (R0)          ; get system time values
                   50   8E   3C 0013   126                MOVZWL  (SP)+, R0                   ; R0 = "year since 0"
                        51   D4 0016   127                CLRL    R1                          ; R0 is now a quadword value
    50   50   50 00000064 8F 7B 0018   128                EDIV    #100, R0, R0, R0            ; R0 = two digit year value
              0C BC   50   B0 0021   129                MOVW    R0, @12(AP)                 ; return year
              04 BC   8E   B0 0025   130                MOVW    (SP)+, @4(AP)               ; return month
              08 BC   6E   B0 0029   131                MOVW    (SP), @8(AP)                ; return day
                        04 002D   132                RET                                 ; return
                           002E   133
                           002E   134
                           002E   135                .END
```

```
FOR$IDATE          00000000 RG    01
SYS$NUMTIM         ******** G     01
```

```
                            +-----------------+
                            ! Psect synopsis !
                            +-----------------+

PSECT name                  Allocation        PSECT No.  Attributes
----------                  ----------        ---------  ----------
.  ABS  .                   00000000 (    0.) 00 (  0.)  NOPIC   USR   CON   ABS   LCL NOSHR NOEXE NORD   NOWRT NOVEC BYTE
_FOR$CODE                   0000002E (   46.) 01 (  1.)   PIC    USR   CON   REL   LCL   SHR   EXE   RD   NOWRT NOVEC LONG
```

```
                      +---------------------------+
                      ! Performance indicators !
                      +---------------------------+

Phase                  Page faults   CPU Time        Elapsed Time
-----                  -----------   --------        ------------
Initialization              29       00:00:00.05     00:00:00.84
Command processing         105       00:00:00.55     00:00:03.53
Pass 1                      98       00:00:00.53     00:00:02.79
Symbol table sort            0       00:00:00.00     00:00:00.00
Pass 2                      38       00:00:00.34     00:00:01.47
Symbol table output          2       00:00:00.02     00:00:00.12
Psect synopsis output        2       00:00:00.01     00:00:00.01
Cross-reference output       0       00:00:00.00     00:00:00.00
Assembler run totals       276       00:00:01.52     00:00:08.78
```

The working set limit was 900 pages.
1677 bytes (4 pages) of virtual memory were used to buffer the intermediate code.
There were 10 pages of symbol table space allocated to hold 2 non-local and 0 local symbols.
135 source lines were read in Pass 1, producing 11 object records in Pass 2.
2 pages of virtual memory were used to define 2 macros.

```
                      +------------------------------+
                      ! Macro library statistics !
                      +------------------------------+

Macro library name                      Macros defined
------------------                      --------------
_$255$DUA28:[SYSLIB]STARLET.MLB;2              2
```

13 GETS were required to define 2 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS$:FORIDATE/OBJ=OBJ$:FORIDATE MSRC$:FORIDATE/UPDATE=(ENH$:FORIDATE)

FORFIND
LIS

FORFMTINT
LIS

FOREXITHA
LIS

FORENODEF
LIS

FORENCOMF
LIS

FORIDATE
LIS

FORENDFIL
LIS

FORERRSNS
LIS

FOREXIT
LIS

FORERROR
LIS

FORFMTCP
LIS

FORENCOMO
LIS

FORINIDES
LIS